



# HITCH INSTALLATION INSTRUCTIONS

MAKE:

KIA

YEARS:

2020 -2024

MODEL/TRIM:

Telluride

www.stealthhitches.com 833-694-4824

RACK RECEIVER KIT#: **SHR63001**

COMPATIBLE WITH TOW KIT: **SHT25031 & SHT25067A**



**2" RACK RECEIVER MAXIMUM PAYLOAD:** 600 LBS

**MAXIMUM TOW RATING:** 6000 LBS

**MAXIMUM TONGUE WEIGHT:** 600 LBS

## UNDER VEHICLE TRIMMING:

HEAT SHIELD: **NO**

FASCIA: **NO**

GRAVEL GUARD TRIMMING: **NO**

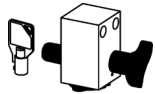


**READ ALL INSTRUCTION WARNINGS AND LABELS**



**NO WELDING, METAL DRILLING OR VISIBLE TRIMMING REQUIRED**

## PARTS SUPPLIED WITH RACK RECEIVER KIT:



LATCH BLOCK  
& KEYS



(2) BOLTS  
5/8"-11 x 5"



(2) 5/8"  
NYLOCK NUTS



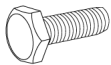
(4) BOLTS  
1/2" - 13 x 4 1/2"



(8) 1/2" FLAT  
WASHERS



(4) 1/2" NYLOCK  
NUTS



(4) M10 1.25 x  
40mm BOLTS  
FINE THREAD



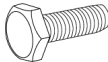
(4) M10 LOCK  
WASHERS



(4) M10 FLAT  
WASHERS



2" RACK  
RECEIVER



(8) 3/8" X  
1-1/4" CAP CREW



(8) 3/8" FLANGE  
NUTS

## ADDITIONAL PARTS FOR TOW KIT:



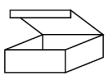
BALL MOUNT  
5" RISE, LONG



CHAIN HOOKS



2" BALL



WIRING KIT BOX

## TOOLS REQUIRED:



3/4", 9/16", & 15/16"  
OPEN END  
WRENCH



14mm, 17mm,  
21mm, 3/4", 9/16"  
& 15/16" SOCKETS



RATCHET



TORQUE  
WRENCH



PRY BAR



SAFETY GLASSES



FLASHLIGHT



90 DEGREE  
PICK



RATCHET  
STRAP



FLATHEAD  
SCREWDRIVER



WIRE BRUSH

## ADDITIONAL TOOLS FOR TOW KIT:



PHILLIPS HEAD  
SCREWDRIVER



STRIPPER/  
CRIMPING  
TOOL



DRILL



5/16" NUT  
DRIVER BIT



MULTIMETER



PLIERS



10mm & 12mm  
SOCKETS



PLASTIC  
PRY TOOLS

**RACK RECEIVER INSTALLATION:** USE STEPS 1-9, 39-41

**2022-2024 ACTIVE TOW KIT INSTALLATION:** USE STEPS 1-29, 36-41 (**SHT25067A**)

**2020-2022 PASSIVE TOW KIT INSTALLATION:** USE STEPS 1-9, 30-41 (**SHT25031**)

# <THESE INSTRUCTIONS MUST BE GIVEN TO THE END USER>

NOTICE: Installation of Stealth products may or may not require the addition of a wiring harness to the vehicle.

- The Rack Receiver only product does not require adding a wiring harness.
- The Rack Receiver plus Tow Kit requires the addition a wiring harness that is compatible with the vehicle's wiring. Depending on the vehicle, the harness will be one of two types, "Active" or "Passive." The wiring section of the instructions will indicate which wiring harness style is being used and how to install it.
- The **Active Harness** plugs into the vehicle's wiring so that the vehicle's computer can communicate with the trailer wiring. This allows certain functions such as cameras or backup alarms to continue to operate as designed.
- The **Passive Harness** is independent of the vehicle's computer and communication system. The module of the harness










**INSTALLATION NOTE:** In most instances, these instructions will only outline disassembly of vehicle components. Re-installation of components will require the installer to retain vehicle hardware and work through disassembly instructions in reverse order. When installation is complete, double check that all vehicle components have been replaced and are secured.

## IMPORTANT SAFETY NOTICE FOR STEALTH HITCH INSTALLERS AND CUSTOMERS.

Read all installation and operating instructions along with all labels before installing or using this product. Do not perform any installation or towing procedures without fully understanding the correct tools and actions for all steps. Call for support if needed.

### **WARNING**

**Failure to comply with the safety information in these instructions could result in serious injury or death.**

-  Do not modify this product in any manner. Doing so could alter its integrity and lead to a loss of attachment
-  Adding Stealth hitch components to the chassis of any vehicle can be hazardous. There is potential for unexpected combustion of fuel, electric shock, burns, shifting or falling of unstable vehicle, damage to vehicle, injury from tool usage and many other hazards. This installation must be completed by someone who is aware of the hazards involved. This person must be knowledgeable of proper safety procedures for a vehicle modification of this nature, and for usage of the
-  Without proper knowledge, towing can be a dangerous activity. Understand all the risks involved with towing before proceeding. For information on towing safety, see "**The Trailer Handbook: A Guide to Understanding Trailer and Towing Safety**" from the National Association of Trailer Manufacturers, [www.NATM.com](http://www.NATM.com) and your trailer and tow vehicle
-  Do not exceed tow or tongue rating of coupler, tow or tongue rating of hitch, or tow or weight ratings of tow vehicle or trailer. See vehicle and trailer manufacturer information for ratings. Exceeding these ratings may cause damage to towing components or loss of
-  While installation is being performed, check for signs of damage or excessive corrosion. Do not install hitch components over vehicle parts that are broken or have compromised structural integrity.
-  This product was designed to fit vehicles in their original, "as manufactured" condition. Compatibility with vehicles having replacement parts, or other modifications is not guaranteed. Inspect vehicle for
-  Some accessories, like the rack receiver, are not rated for towing. Do not use any accessories without proper knowledge of their use.
-  A visual inspection of the hitch should be performed before each use. Regularly check that all connections are secure, including those that secure the hitch to the vehicle. Check for cracks or damage to the hitch. Do not use the hitch if cracks or damage outside of normal wear is found. Using a hitch that has unsecure connections and/or cracks or damage could result in damage to the tow vehicle, trailer, towing components and loss of attachment between the tow vehicle and
-  Stealth hitches are not compatible with any weight distribution or sway control products. Adding additional products to the trailer or chassis which modifies the function of the Stealth hitch may cause hitch failure.

**NOTICE:** Installation of hitch requires removal of vehicle parts and interaction with vehicular electronics. Before installation, check the condition of body panels and note any locations where panels are not flush. Check the electronic functions of the vehicle, such as: headlights, taillights, turn signals, cameras, backup sensors, Parking Distance Controller (PDC), foot activated cargo access, etc. It is the responsibility of the installer to restore the fit and function of the vehicle.

## GAIN ACCESS TO MOUNTING AREA



SPARE TIRE  
LEVER

- OR -



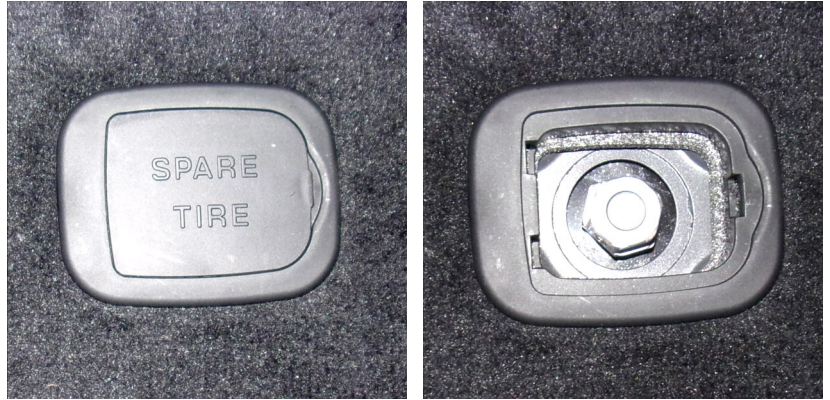
21mm  
SOCKET



FLATHEAD  
SCREWDRIVER

1. Inside the rear cargo area, lift rear floor panel to gain access to the spare tire lowering nut.

## USE SPARE TIRE LEVER OR 21mm SOCKET TO LOWER THE SPARE TIRE



2. Lower and remove the spare tire. Refer to the vehicle owner's manual if needed.

## REMOVE THE SPARE TIRE



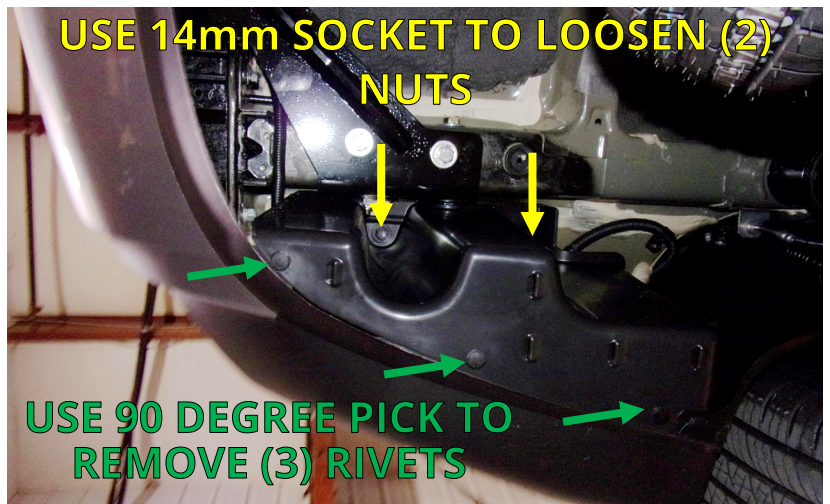
14mm  
SOCKET



90 DEGREE  
PICK

3. Under the rear of the vehicle, locate the driver side gravel guard. Loosen (2) nuts (yellow arrows) and remove (3) plastic rivets (green arrows) holding the gravel guard to the vehicle.

## USE 14mm SOCKET TO LOOSEN (2) NUTS



## USE 90 DEGREE PICK TO REMOVE (3) RIVETS



## GAIN ACCESS TO MOUNTING AREA CONTINUED



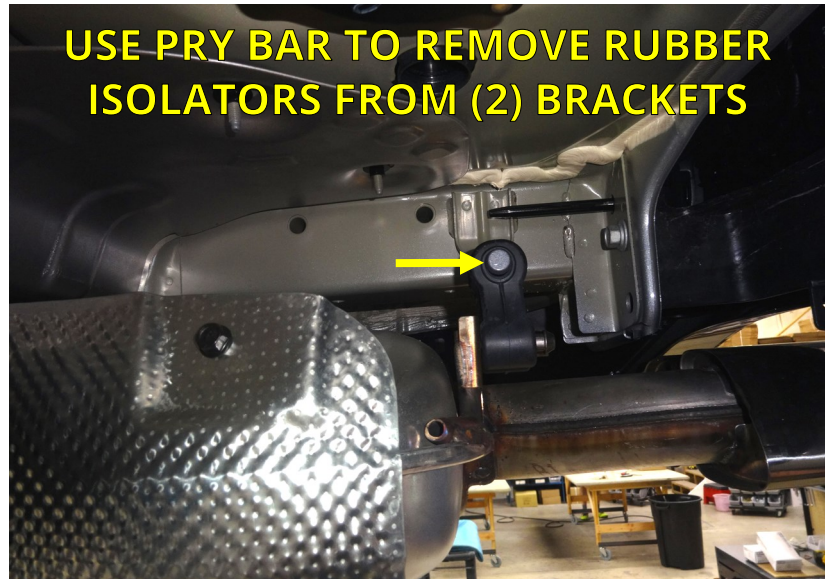
RATCHET  
STRAP



PRY BAR

4. Attach a ratchet strap under the vehicle to support the exhaust. Above the exhaust are (2) brackets connected by rubber isolators. Use a pry bar to disconnect the top of the isolators from the vehicle. Using the ratchet strap, lower the exhaust to gain access to the area above the exhaust.

**NOTE:** Spray lubricant on the connection points to ease removal.

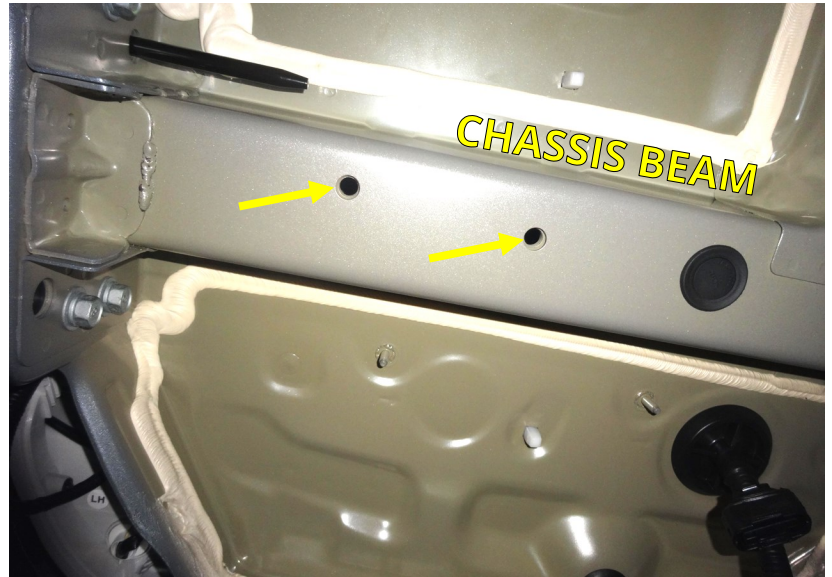


**USE PRY BAR TO REMOVE RUBBER ISOLATORS FROM (2) BRACKETS**



WIRE BRUSH

5. On each side of the vehicle, locate the (2) threaded holes on the underside of the chassis beam. These threaded holes will be used for the installation. They need to be free from debris to allow a bolt to be threaded into them. A wire brush can be used to clean these holes. Screw the (4) supplied M10-1.25 bolts into these holes to confirm they are clean and have no obstructions. Remove the bolts.



**CHASSIS BEAM**

## INSTALL STEALTH HITCH FRAME



9/16"  
SOCKET



9/16"  
OPEN END



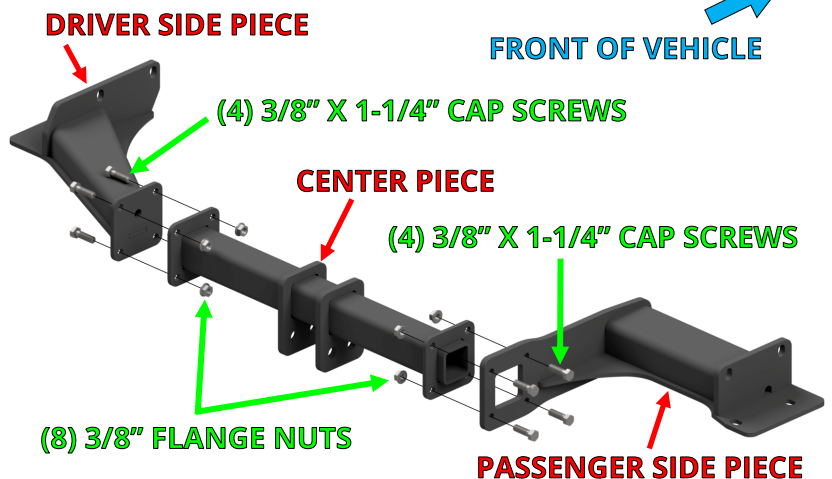
RATCHET



TORQUE  
WRENCH

6. The Stealth hitch frame is made up of three pieces which must be assembled. Retrieve the three hitch frame pieces, (8) 3/8" X 1-1/4" cap screws, and (8) 3/8" flange nuts. Use the image to orient and assemble the hitch frame.
- Torque the 8 bolted connections to 30 ft. lbs.

**USE 9/16" SOCKET TO ASSEMBLE STEALTH HITCH FRAME**



**DRIVER SIDE PIECE**

**FRONT OF VEHICLE**

**(4) 3/8" X 1-1/4" CAP SCREWS**

**CENTER PIECE**

**(4) 3/8" X 1-1/4" CAP SCREWS**

**(8) 3/8" FLANGE NUTS**

**PASSENGER SIDE PIECE**



## INSTALL STEALTH HITCH FRAME CONTINUED



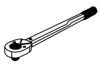
17mm  
SOCKET



3/4"  
SOCKET

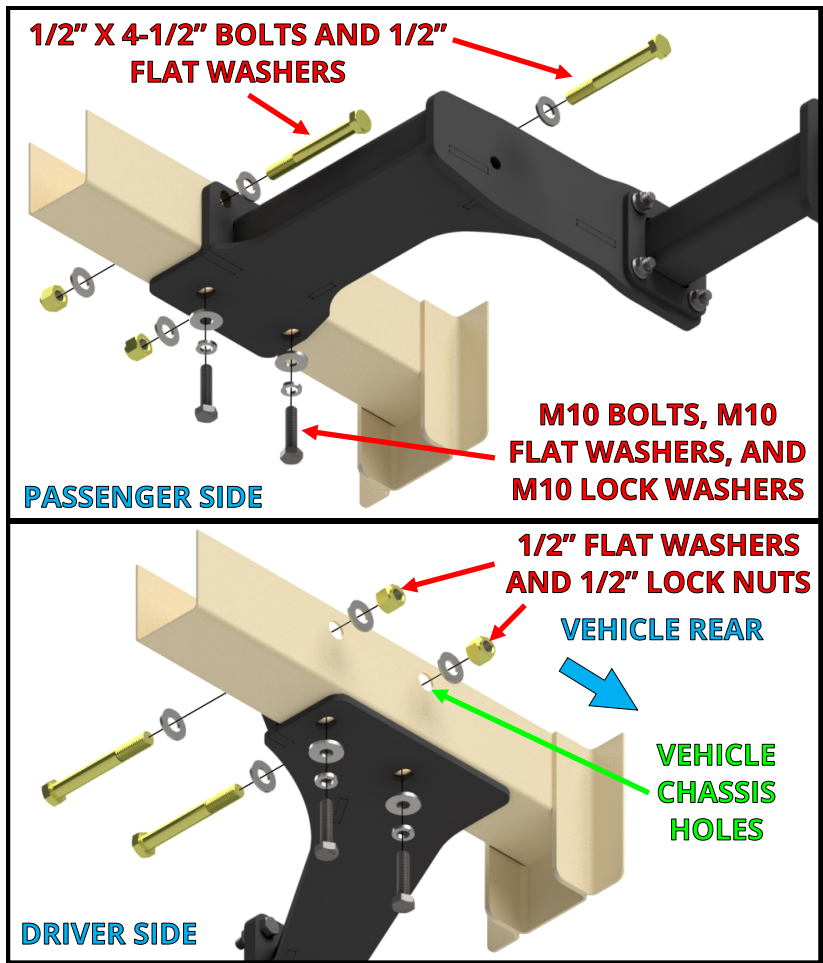


3/4" OPEN  
END WRENCH



TORQUE  
WRENCH

7. Lift the Stealth hitch frame under the vehicle and align the top holes with the vehicle chassis holes. Insert supplied 1/2" x 4-1/2" bolts and flat washers from the inside, as shown, to hold the hitch frame in place.
  8. Align the (4) holes on the bottom of the hitch frame with the threaded holes on the underside of the chassis beams. Insert (4) M10 bolts, lock washers, and flat washers, as shown. Add 1/2" washers and nuts to the (4) 1/2" bolts that are inserted from the side.
- Tighten and torque the (4) M10 bolts to 45 ft.-lbs.
  - Tighten and torque the (4) 1/2" bolts to 100 ft.-lbs.



## MOUNT LATCH BLOCK



15/16"  
SOCKET



15/16" OPEN  
END WRENCH



TORQUE  
WRENCH

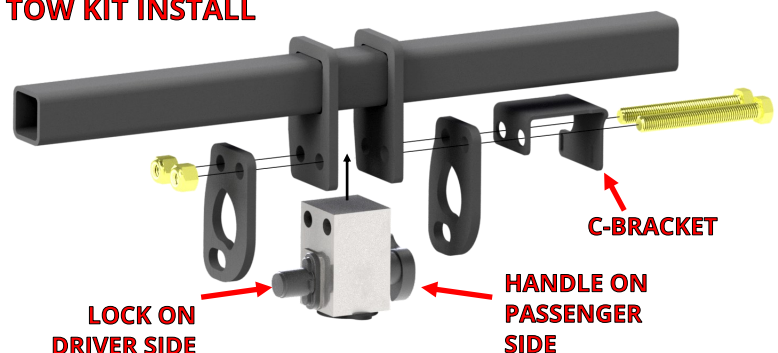
9. Installation of the latch block varies depending on which kit you are installing.
- **Rack Receiver Kit:** Install the latch block with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.
  - **Tow Kit:** Retrieve C-bracket from wiring harness kit box. Install the latch block, (2) chain hooks, and C-bracket with (2) 5/8"-11 x 5" bolts and (2) 5/8" nylock nuts. Tighten each bolt to 150 ft.-lbs.

**NOTICE:** Keys are packaged within the latch block, remove keys and store in safe location.

### RACK RECEIVER KIT INSTALL



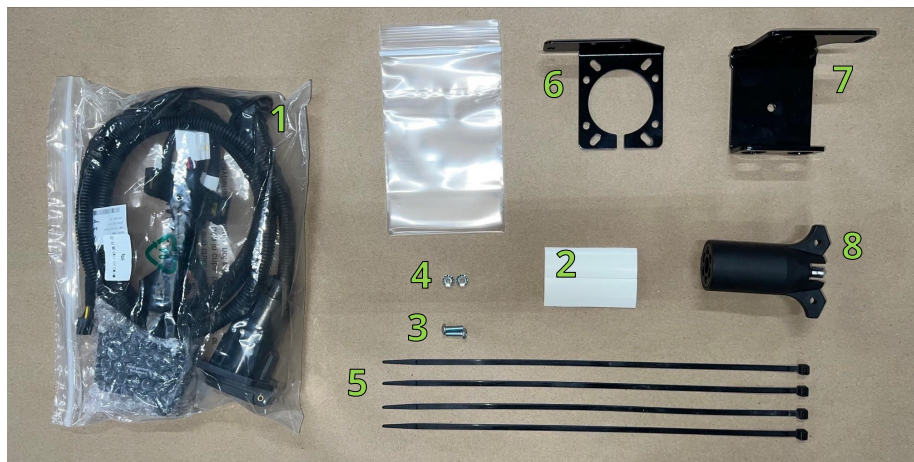
### TOW KIT INSTALL



**IF INSTALLING A RACK RECEIVER KIT, SKIP TO STEP 39.**  
**IF INSTALLING THE ACTIVE TOW KIT (SHT25031A), SKIP TO STEP 10.**  
**IF INSTALLING THE PASSIVE TOW KIT (SHT25031), SKIP TO STEP 30.**

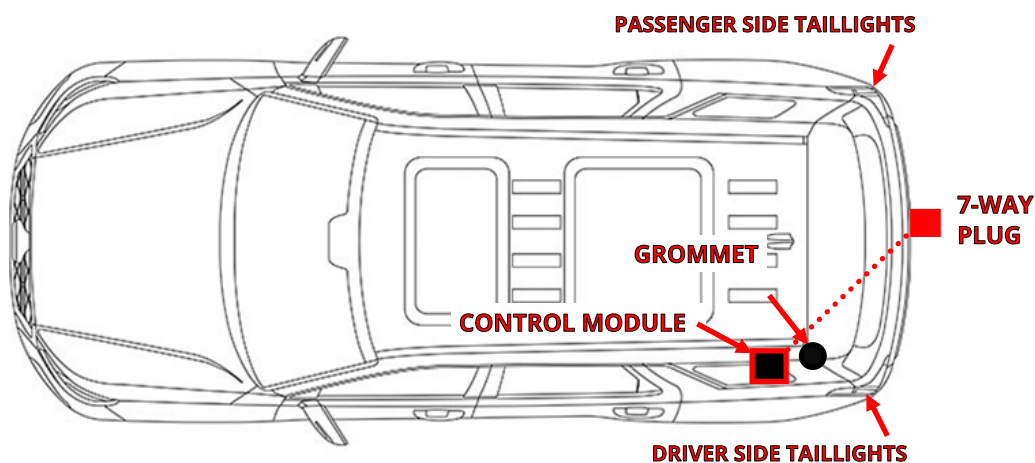
## INSTALL ACTIVE WIRING KIT

#	DESCRIPTION	QTY
1	OEM WIRING KIT	1
2	ADHESIVE FOAM STRIP	2
3	5/8" LONG PHILLIPS SCREWS	2
4	#10 LOCK NUT	2
5	14" CABLE TIE	4
6	MOUNTING BRACKET	1
7	C-BRACKET	1
8	7-POLE TO 4-POLE ADAPTER	1



10. Locate the wiring kit box. Review the contents of the box against the list above to check for missing components. The active wiring kit uses a control module to manage the functions of the trailer lighting. The module will connect to the vehicle through an included wire harness. The harness has an **"input"** side that receives power and signals from the vehicle's electronic systems. The **"output"** side of the harness delivers this information to the 7-way plug. The control module is connected to the vehicle as outlined in the next steps.

**NOTICE: Do not allow electrical system to become disconnected from power or ground. Doing so may interrupt electrical systems.**





## INSTALL **ACTIVE** WIRING KIT CONTINUED

11. In the rear cargo area, lift up and remove the luggage board.



90 DEGREE  
PICK

12. Locate the 3rd row seat plastic cover. Use a 90 degree pick tool to remove (1) rivet from the cover.



13. Pull up on the plastic cover to disengage and release the plastic rivets holding the cover down. Remove the 3rd row seat cover from the cargo compartment.





## INSTALL **ACTIVE** WIRING KIT CONTINUED

14. Locate and remove the driver side cargo area storage cover. remove the spare tire tool and jack from the driver side storage area.



**REMOVE THE DRIVER  
SIDE CARGO AREA  
STORAGE COVER**

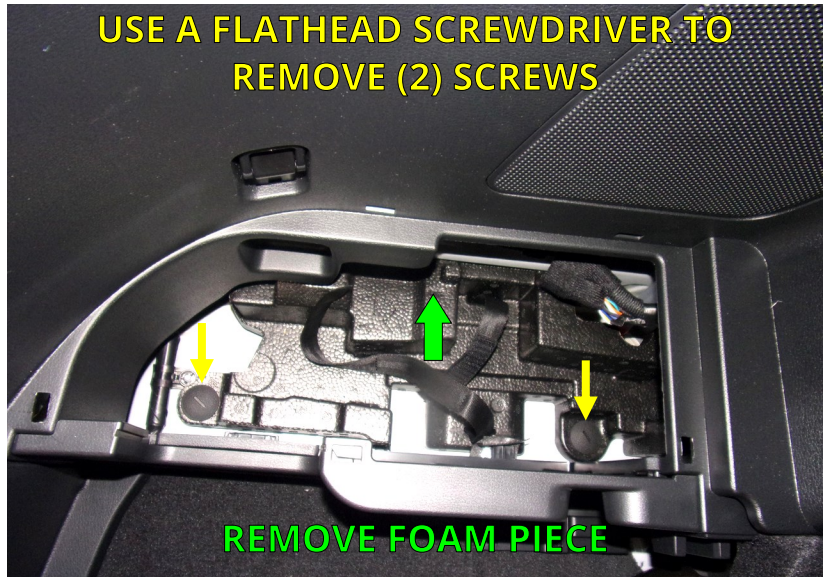


**REMOVE SPARE TIRE TOOL AND JACK**



FLATHEAD  
SCREWDRIVER

15. On the bottom of the driver side storage area use a flathead screwdriver to remove (2) plastic nuts. Remove the foam piece on the bottom of the storage area.



**USE A FLATHEAD SCREWDRIVER TO  
REMOVE (2) SCREWS**

**REMOVE FOAM PIECE**

16. On the bottom of the driver side cargo area locate and remove the indicated rubber grommet. The grommet may be discarded.

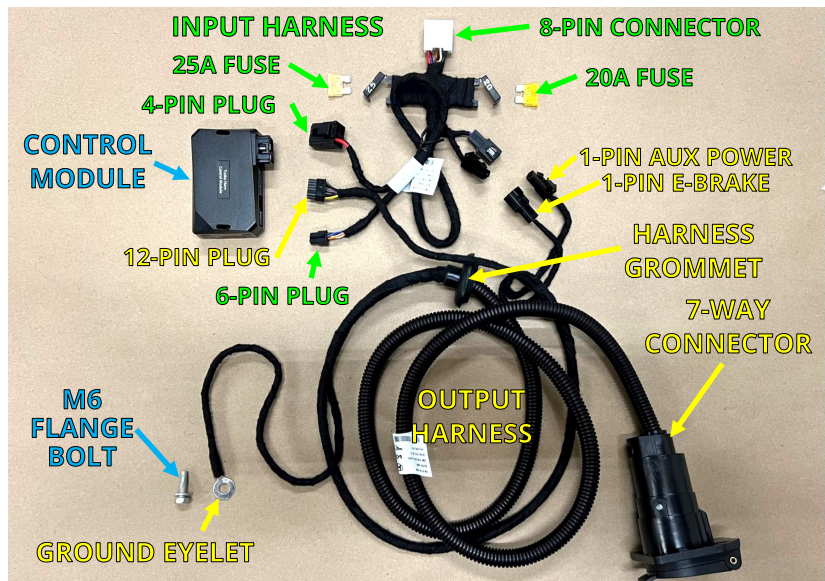


**REMOVE THE GROMMET**



## INSTALL ACTIVE WIRING KIT CONTINUED

17. Retrieve the OEM wiring harness from the wiring kit box. Use the diagram to identify the harness components.

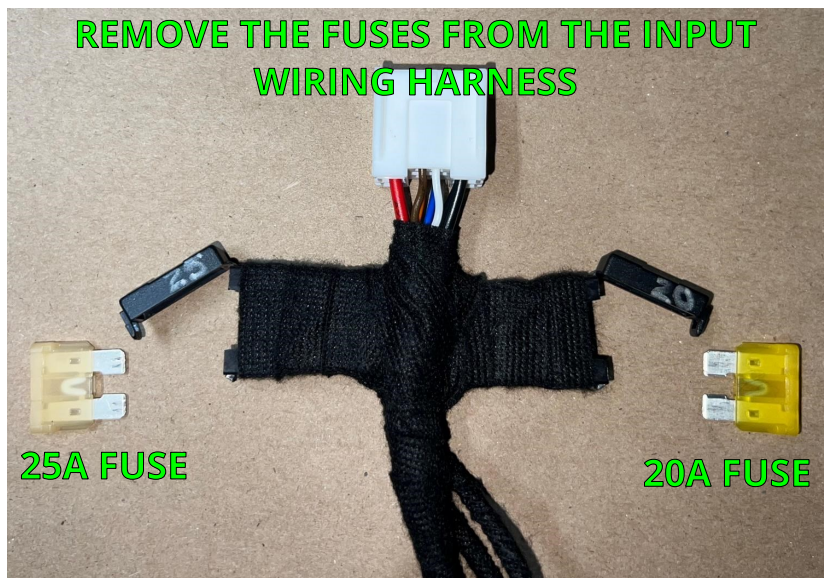


18. Locate the output wiring harness from the wiring kit. Pass the (3) plugs and eyelet up from the bottom of the vehicle through the grommet hole and into the cargo area. Seat the harness grommet into the grommet hole.



19. Locate the input wiring harness from the wiring kit. Remove both the 25 Amp and 20 Amp fuses from the harness as shown.

**NOTE:** Mark the fuse holders to easily identify and replace the fuses.





## INSTALL ACTIVE WIRING KIT CONTINUED

20. Inside the driver side storage area, locate the 8-pin connector on the factory vehicle harness near the grommet. Remove the tape covering the connector. Plug the 8-pin input harness plug into the vehicle connector.



21. Locate the 1-pin Aux power and 1-pin E-brake power connectors on the input harness. Plug the two connectors into the vehicle harness, as shown. After connecting the plugs check that they are locked together.



10mm  
SOCKET

22. There are two options to attach the grounding eyelet. First check if there is a threaded hole in the storage area as shown. If its present use a socket to attach the ground ring with the provided M6 bolt.

**NOTE:** If the threaded hole is not present skip this step and proceed to the next. Otherwise skip to **Step 27.**





## INSTALL **ACTIVE** WIRING KIT CONTINUED

**NOTICE:** Skip Steps 23-25 if you were able to complete Step 22.

23. In the rear cargo area lift up on the threshold to remove it.



PHILLIPS HEAD  
SCREWDRIVER

24. Use a Phillips head screwdriver to remove (1) screw on the driver side edge of where the threshold was removed.



12mm  
SOCKET



PLASTIC  
PRY TOOLS

25. Use a plastic pry tool to partially open up the plastic side panel above where the screw was removed. Pull the panel open enough that the grounding screw shown in the right image is uncovered.

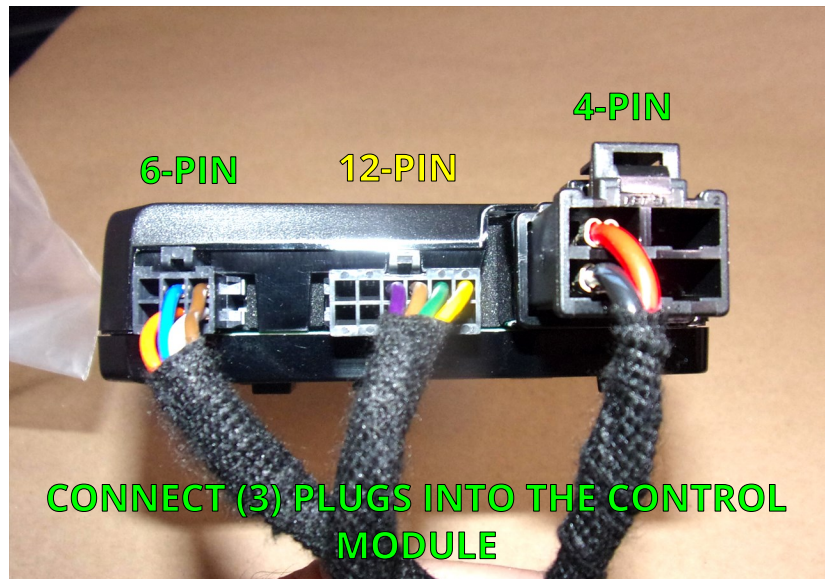


26. Route the grounding eyelet from the output harness to the indicated screw. Use a socket to attach the ground eyelet to the screw. Replace the plastic side panel and threshold.



## INSTALL **ACTIVE** WIRING KIT CONTINUED

27. Connect the (3) remaining input and output connectors to the control module as shown. Each plug will lock in place when correctly connected.

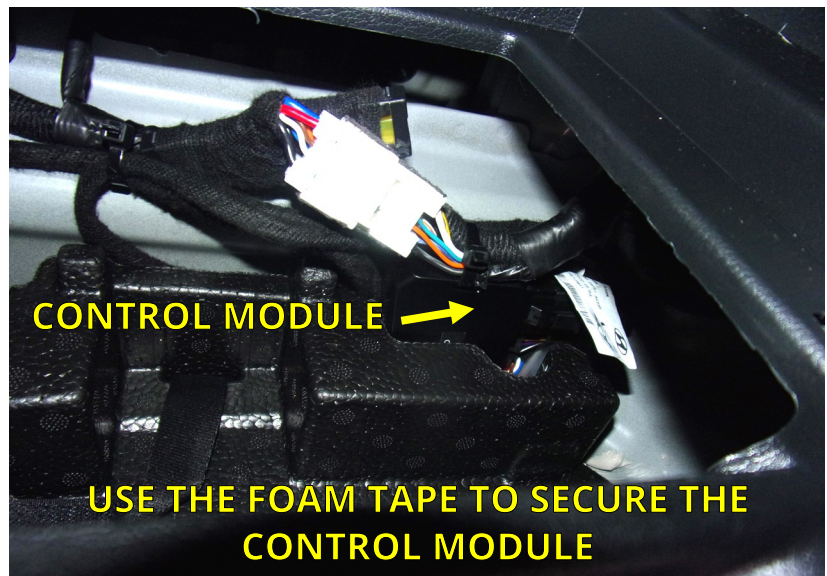


28. Replace the 25 Amp and 20 Amp fuses into the input harness. Replace the foam piece that was removed from the driver side storage area. Use a flathead screwdriver to replace the two plastic nuts.



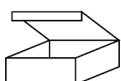
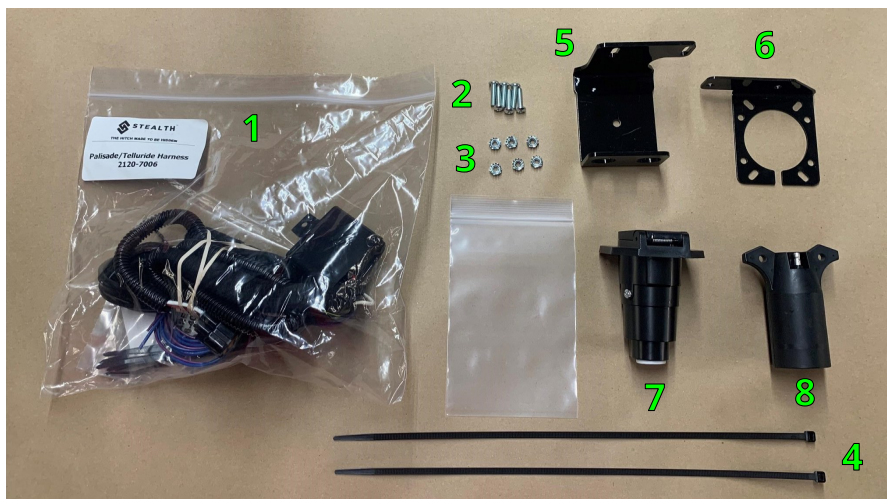
29. Retrieve the adhesive foam strip from the wiring kit box. Use the foam tape to secure the control module between the metal side of the driver side storage and the foam piece. Replace the jack, spare tire tools, and storage area cover.

**SKIP TO STEP 36 TO CONTINUE INSTALLATION.**



## INSTALL PASSIVE WIRING KIT

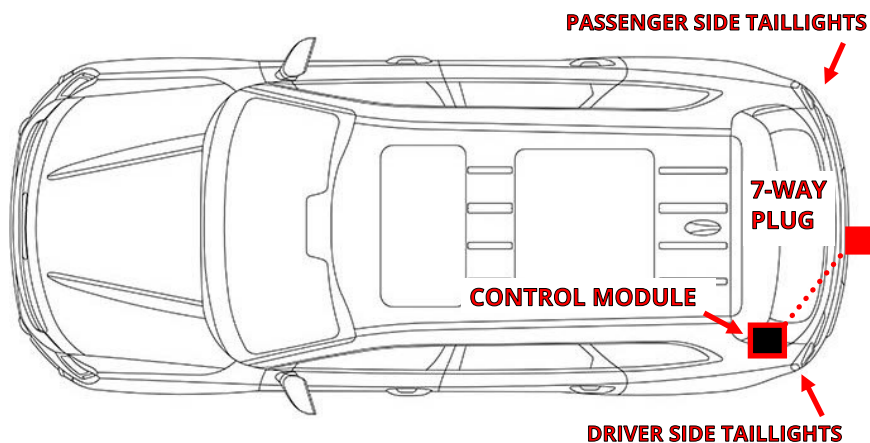
#	DESCRIPTION	QTY
1	7-WAY WIRING HARNESS <ul style="list-style-type: none"> <li>CONTROL MODULE &amp; WIRES</li> <li>CABLE TIE</li> <li>SELF-TAPPING SCREW</li> <li>ADHESIVE SQUARE</li> </ul>	1
2	5/8" LONG PHILLIPS SCREWS	6
3	#10 LOCK NUT	6
4	CABLE TIE - 14"	2
5	C-BRACKET	1
6	MOUNTING BRACKET	1
7	7-WAY HOUSING	1
8	7-POLE TO 4-POLE ADAPTER	1



PASSIVE WIRING  
KIT BOX

30. Locate the wiring kit box. Review the contents of the box against the list above to check for missing components. The passive wiring kit uses a control module to manage the functions of the trailer lighting. The module will connect to the vehicle through an included wire harness. The harness has an **"input"** side that receives power and signals from the vehicle's electronic systems. The **"output"** side of the harness delivers this information to the 7-way plug. The control module is connected to the vehicle as outlined in the next steps.

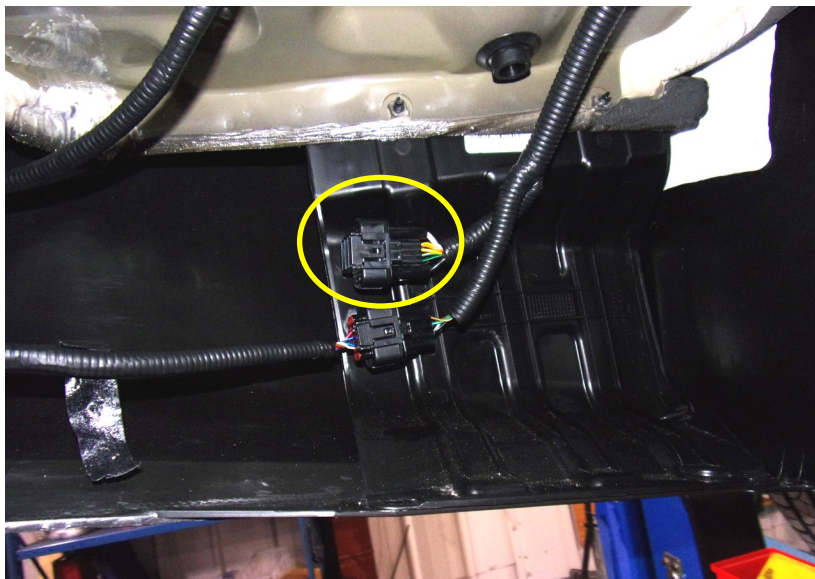
**NOTICE: Do not allow electrical system to become disconnected from power or ground. Doing so may interrupt electrical systems.**





## INSTALL WIRING KIT CONTINUED

31. Locate the factory trailer wire harness plug under the driver side rear of vehicle. Remove the tape connecting the plug to the rest of the harness. Remove the protective cap from the plug.



32. Retrieve the control module and wires from the wiring kit box. Plug the harness into the factory trailer wire harness plug, as shown.



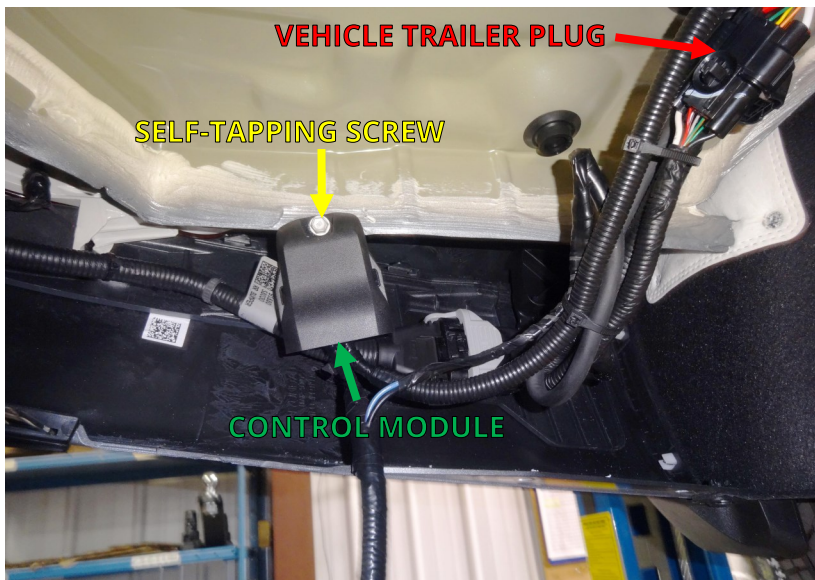
DRILL



5/16" NUT  
DRIVER BIT

33. Use the supplied self-tapping screw to mount the control module to bottom edge of the vehicle, as shown. Use cable ties to secure wiring.

**NOTICE:** Make sure the control module is mounted so that the epoxy side of the module is facing toward the ground, to prevent water buildup.

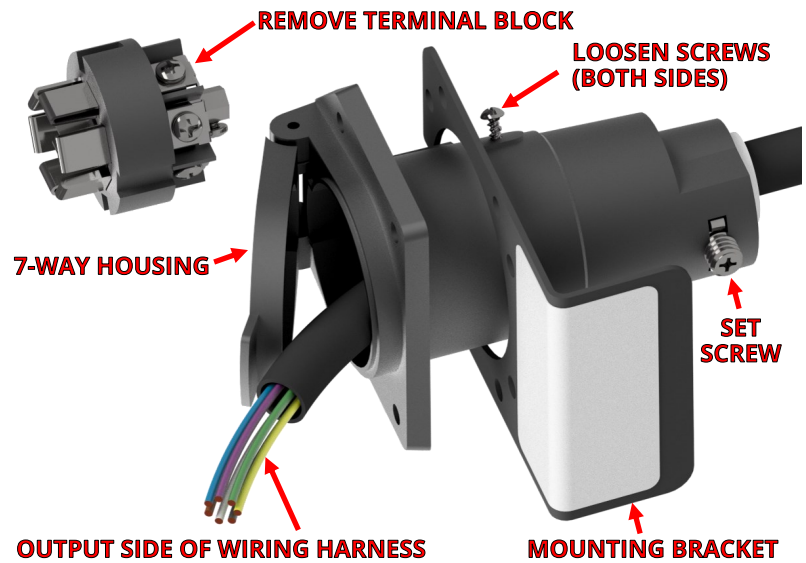


## WIRE 7-WAY PLUG



PHILLIPS HEAD  
SCREWDRIVER

34. Locate the 7-way housing. Use a screwdriver to loosen (2) screws. Remove 7-way round terminal block. Place the mounting bracket onto the 7-way housing as shown. Use a screwdriver to loosen the set screw at the bottom of the 7-way housing. Route output side wires of the wiring harness through the 7-way housing.



**Please follow instructions below very carefully.**

**Incorrect wiring of the 7-way receptacle causes the vast majority of wiring problems.**



PHILLIPS HEAD  
SCREWDRIVER

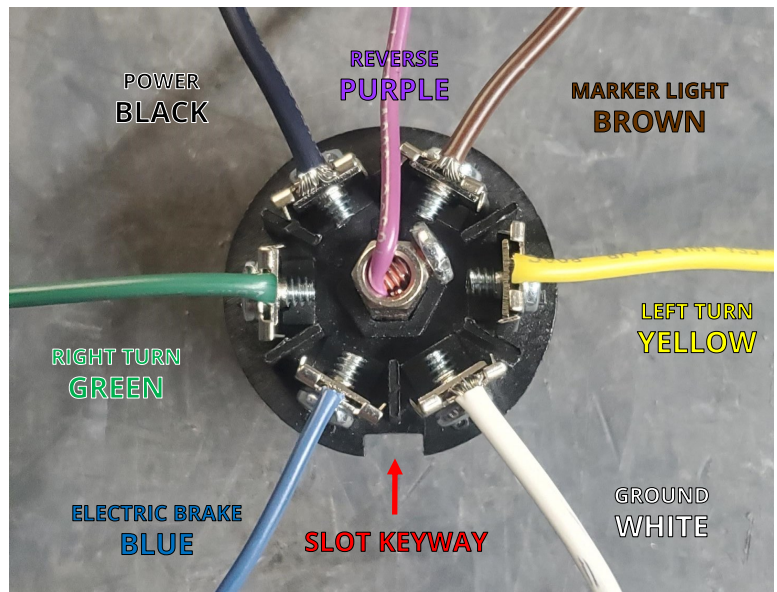


STRIPPER/  
CRIMPING  
TOOL

35. Locate the slot keyway. Starting from the keyway going **clockwise**, attach the wires as follows:

- Blue
- Green
- Black
- Brown
- Yellow
- White
- Purple (middle)

***NOTICE: Markings on the receptacle may not match the correct wire configuration. Please disregard and follow the instruction above.***





## TEST 7-WAY HARNESS WIRING



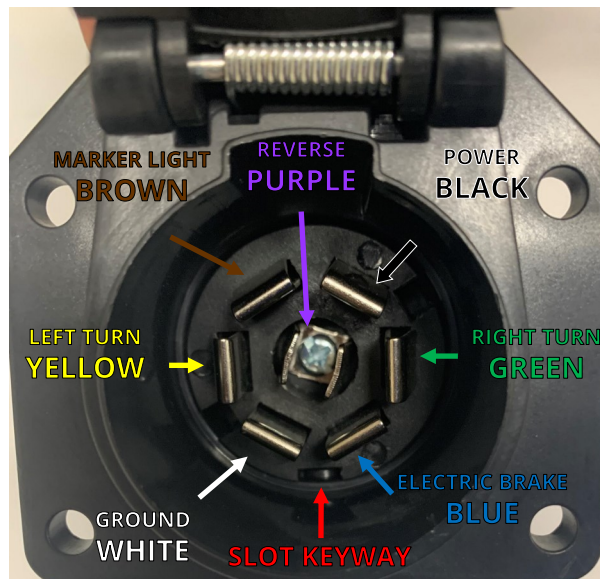
PHILLIPS HEAD  
SCREWDRIVER



MULTIMETER

36. **PASSIVE HARNESS:** Put the 7-way receptacle back together. While everything is still accessible, you should test the wiring to make sure everything is connected properly and in working order.

**ACTIVE HARNESS:** Use the list below to test the 7-way receptacle.



- Start by connecting the multimeter negative probe to the ground blade on the 7-way receptacle.
- Next, connect the multimeter positive probe to the power blade on the 7-way receptacle and check for 12 volts.
- Once that is confirmed, move the positive probe to the left turn blade on the 7-way receptacle and check for 12 volts when the vehicle left turn blinker is active. You should see it pulse.
- Next, move the positive probe to the right turn blade and check for 12 volts when the right turn blinker is active. You should see it pulse.
- Next, move the positive probe to the marker/taillights. With the vehicle lights on you should see 12 volts constant.
- Lastly, with the brake depressed, move the positive probe to the left turn blade where you should see 12 volts constant. Move the probe to the right turn blade where you should also see 12 volts constant.

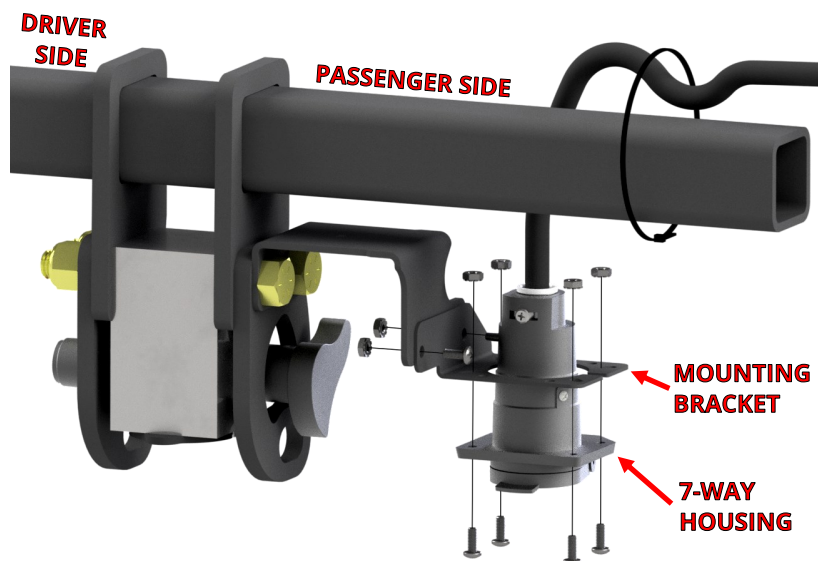


PHILLIPS HEAD  
SCREWDRIVER

37. Attach the mounting bracket and 7-way housing to the Stealth hitch frame as shown. Secure harness to Stealth hitch frame with cable ties.

38. Secure all wires and wiring components. Use the remaining cable ties to secure wiring so that it is not loose. Wiring should not be visible once the vehicle is reassembled.

- **ACTIVE HARNESS:** Replace the driver side cargo area storage cover, 3rd row seat plastic cover, and the luggage board, see Steps 23-25.





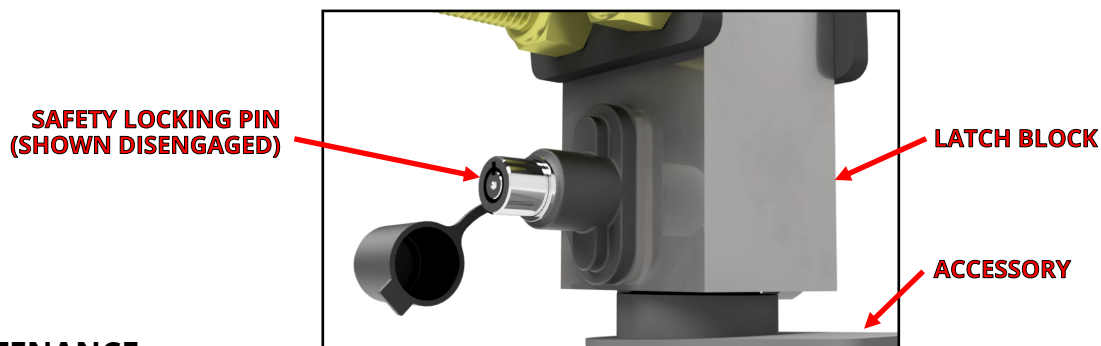
## REINSTALL VEHICLE COMPONENTS

39. Reattach the exhaust, gravel guard, and spare tire. Refer to Steps 1-4. Pictured is the finished install from underneath the vehicle.



## FINAL VEHICLE EXAMINATION

40. Examine the body panels to ensure that they are in a pre-installation condition. Test the electronic functions of the vehicle. Correct any inconsistencies.
41. Ensure that hitch components work properly.
  - **Verify that the lock works correctly.** Push in the safety lock on the latch block then unlock with key. The lock should slide back out with the key when unlocked.
  - **Verify that each accessory can be installed correctly.** Use the following steps to install and remove each accessory that will be used with the hitch. (*Rack Receiver and Ball Mount if purchased.*)
    1. Prepare latching mechanism. Turn handle clockwise if needed.
    2. Firmly insert "post" of accessory into latch block until handle releases indicating that the accessory is latched.
    3. Push in the safety locking pin until it fully engages. The locking pin prevents the handle from turning when pushed in, and confirms that the block is securely latched onto the accessory. The safety locking pin will not depress if the accessory is not fully latched.
    4. Use key to release safety locking pin.
    5. While holding on to the accessory, rotate handle clockwise to release and remove the accessory.
  - **Verify that no part of the accessories come into contact with the body of the vehicle.**



## PRODUCT USE AND MAINTENANCE

**NOTICE:** *If the hitch is being installed by a professional, the installer is responsible for training the end user in the use and maintenance of the product.*

- **Accessory installation procedure:**
  1. Prepare latching mechanism. Turn handle clockwise if needed.
  2. Firmly insert "post" of accessory into latch block until handle spins counter-clockwise indicating that the accessory is latched.
  3. Always depress the safety locking pin and check that it has fully engaged.
- **Never use any accessory with the safety lock disengaged.** Until the safety locking pin is engaged, the handle is able to turn. A fully engaged safety locking pin is confirmation that the accessory is properly latched into the latch block.
- **Never use the rack receiver for towing.** The rack receiver accessory is only to be used with payload carrying products, such as bike racks or luggage racks.
- **Before each use, give the post of the accessory a light coating of lithium based grease.**
- **Before each use, inspect the hitch to ensure that all bolted connections are secure and that no cracks or damage are present.** Do not tow with the hitch if cracks or damage outside of normal wear is found.
- **Remove the Stealth accessories from the latch block after each use.** Do not leave accessories plugged in for extended periods of time.